AMENDMENTS TO THE CLAIMS

Please amend the claims as follows.

1. (Original) A method, comprising:

initiating a copy operation from a first storage cell to a second storage cell, wherein the copy operation initially utilizes a first write block size;

changing the write block size to utilize a second write block size, different from the first write block size;

measuring a performance parameter at the second write block size; and

maintaining the second block size if the performance parameter exceeds a threshold.

2. (Original) The method of claim 1, wherein initiating a copy operation from a first storage cell to a second storage cell comprises setting the first write block size to a lower bound of write block sizes.

3. (Original) The method of claim 2, further comprising measuring a performance parameter at the first write block size.

4. (Original) The method of claim 3, wherein changing the write block size to utilize a second write block size, different from the first write block size, comprises incrementing the write block size.

5. (Original) The method of claim 4, wherein maintaining the second block size if the performance parameter exceeds a threshold comprises comparing the performance parameter measured at the first block size with the performance parameter measured at the second block size.

6. (Original) The method of claim 5, further comprising repeatedly incrementing the write block size and comparing a performance parameter at a current write block size with a performance parameter at a previous write block size.

7. (Original) The method of claim 6, further comprising terminating incrementing the write block size when the current write block size reaches an upper bound.

8. (Original) A method, comprising:

initiating a data transfer operation between a first storage cell and a second storage cell, wherein the data transfer operation initially utilizes a write block size referred to as a native write block size;

determining a data transfer performance parameter associated with the native write block size;

varying the write block size through a plurality of write block sizes different than the native write block size;

determining a data transfer performance parameter associated with at least one of the plurality of write block sizes different than the native write block size; and

changing the native write block size if the data transfer performance parameter at one of the plurality of write block sizes different than the native write block size satisfies a performance threshold.

9. (Original) The method of claim 8, further comprising establishing one or more parameters pursuant to which the data transfer operation is initiated.

10. (Original) The method of claim 8, wherein varying the write block size through a plurality of write block sizes different than the native write block size comprises:

setting the write block size to a first write block size; and

changing the write block size in response to a triggering event.

11. (Original) The method of claim 10, wherein the first write block size is a lower bound of a range of write block sizes and changing the write block size comprises increasing the write block size by a defined increment.

12. (Original) The method of claim 10, wherein the first write block size is an upper bound of a range of write block sizes and changing the write block size comprises decreasing the write block size by a defined increment.

13. (Original) The method of claim 8, wherein determining a data transfer performance parameter associated with the native write block size

comprises measuring a data transmission throughput at the native write block size.

14. (Original) The method of claim 8, wherein determining a data transfer performance parameter associated with the native write block size comprises measuring a round trip transmission time at the native write block size.

15. (Original) The method of claim 8, wherein determining a data transfer performance parameter associated with at least one of the plurality of write block sizes different than the native write block size further comprises:

recording a data transfer performance parameter at at least one write block size in a memory location; and

associating the data transmission performance parameter with the write block size.

16. (Original) The method of claim 8, wherein changing the native write block size if the data transfer performance parameter at one of the plurality of write block sizes different than the native write block size satisfies a performance threshold comprises changing the native write block size if the data transfer performance parameter at one of the plurality of write block sizes different than the native write block size is greater than the corresponding performance parameter at the native write block size.

17. (Original) The method of claim 8, further comprising:

recording, in a suitable memory location, an array of performance parameters associated with write block sizes;

searching the array for the best performance parameter; and

changing the native block size to the block size associated with the best performance parameter.

18. (Original) A computer program product comprising logic instructions recorded on a computer-readable medium that, when executed, cause a computer to execute the method of claim 8.

19. (Original) A network element in a computer-based storage network, comprising:

a network interface;

a processor;

a memory module; and

a communication bus that provides a communication connection between the network interface, the processor, and the memory module, wherein the memory module comprises logic instructions that, when executed on the processor, cause the processor to:

initiate a data transfer operation between a first storage cell and a second storage cell, wherein the data transfer operation initially utilizes a write block size referred to as a native write block size;

determine a data transfer performance parameter associated with the native write block size;

periodically vary the write block size through a plurality of write block sizes different than the native write block size;

determine a data transfer performance parameter associated with at least one of the plurality of write block sizes different than the native write block size; and

change the native write block size if the data transfer performance parameter at one of the plurality of write block sizes different than the native write block size satisfies a performance threshold.

20. (Original) The network element of claim 19, wherein the logic instructions that cause the network element to periodically vary the write block size through a plurality of write block sizes different than the native write block size further cause the network element to:

set the write block size to a boundary write block size; and

periodically increment the write block size.

21. (Original) The network element of claim 19, wherein the logic instructions that cause the network element to determine a data transfer performance parameter associated with the native write block size further cause the network element to measure a data transmission throughput at the native write block size.

22. (Original) The network element of claim 19, wherein the logic instructions that cause the network element to determine a data transfer performance parameter associated with the native write block size further cause the network element to measure a round trip transmission time at the native write block size.

23. (Original) The network element of claim 19, wherein the logic instructions that cause the network element to determine a data transfer performance parameter associated with at least one of the plurality of write block sizes different than the native write block size further cause the network element to:

record a data transfer performance parameter at a plurality of write block sizes in a memory location; and

associate the data transmission performance parameter with the write block size.

24. (Original) The network element of claim 19, wherein the logic instructions that cause the network element to change the native write block size if the data transfer performance parameter at one of the plurality of write block sizes different than the native write block size satisfies a performance threshold further cause the network element to change the native write block size if the data transfer performance parameter at one of the plurality of write block sizes different than the native write block size is greater than the corresponding performance parameter at the native write block size.

25. (Original) The network element of claim 19, further comprising logic instructions that cause the network element to:

record, in a suitable memory location, an array of performance parameters associated with write block sizes;

search the array for the best performance parameter; and

change the native block size to the block size associated with the best performance parameter.

26. (Original) A network element in a computer-based storage network, comprising:

a network interface;

a memory module;

a communication bus that provides a communication connection between the network interface and the memory module,

means for initiating a data transfer operation between a first storage cell and a second storage cell, wherein the data transfer operation initially utilizes a write block size referred to as a native write block size;

means for determining a data transfer performance parameter associated with the native write block size;

means for periodically varying the write block size through a plurality of write block sizes different than the native write block size;

means for determining a data transfer performance parameter associated with at least one of the plurality of write block sizes different than the native write block size; and

means for changing the native write block size if the data transfer performance parameter at one of the plurality of write block sizes different than the native write block size satisfies a performance threshold.

27. (Previously Presented) The method of claim 1, wherein the copy operation copies data from a logical unit residing on the first storage cell to a logical unit residing on the second storage cell via a switching network.

28. (Previously Presented) The method of claim 27, further comprising:

monitoring one or more transmission conditions on the switching network; and

evaluating a performance parameter at one or more different write block sizes when one or more transmission conditions change by a threshold amount.

29. (Previously Presented) The method of claim 27, further comprising evaluating a performance parameter at one or more different write block sizes after a predetermined amount of time has elapsed.

30. (Previously Presented) The method of claim 8, wherein the data transfer operation copies data from a logical unit residing on the first storage cell to a logical unit residing on the second storage cell via a switching network.

31. (Previously Presented) The method of claim 30, further comprising:

monitoring one or more transmission conditions on the switching network; and

evaluating a performance parameter at one or more different write block sizes when one or more transmission conditions change by a threshold amount.

32. (Previously Presented) The method of claim 30, further comprising evaluating a performance parameter at one or more different write block sizes after a predetermined amount of time has elapsed.

33. (Previously Presented) The network element of claim 19, wherein the memory module comprises logic instructions that, when executed on the processor, cause the processor to copy data from a logical unit residing on the first storage cell to a logical unit residing on the second storage cell via a switching network.

34. (Previously Presented) The network element of claim 33, wherein the memory module comprises logic instructions that, when executed on the processor, cause the processor to:

monitor one or more transmission conditions on the switching network; and

evaluate a performance parameter at one or more different write block sizes when one or more transmission conditions change by a threshold amount.

35. (Previously Presented) The network element of claim 19, wherein the memory module comprises logic instructions that, when executed on the processor, cause the processor to evaluate a performance parameter at one or more different write block sizes after a predetermined amount of time has elapsed.

36. (Previously Presented) The network element of claim 26, further comprising means for copying data from a logical unit residing on the first storage cell to a logical unit residing on the second storage cell via a switching network.

37. (Previously Presented) The network element of claim 36, further comprising:

means for monitoring one or more transmission conditions on the switching network; and

means for evaluating a performance parameter at one or more different write block sizes when one or more transmission conditions change by a threshold amount.

38. (Previously Presented) The network element of claim 36, further comprising means for evaluating a performance parameter at one or more different write block sizes after a predetermined amount of time has elapsed.

39. (New) A method to manage a remote copy process between a first storage cell in a storage network and a second storage cell in a storage network, comprising:

establishing at least one of a plurality of parameters associated with at least one characteristic of the remote copy process;

establishing at least one of a plurality of parameters associated with a spectrum sweep throughput probe;

initiating the remote copy process to copy data from a first logical unit in the first storage cell to a copy of the first logical unit in the second storage cell over the storage network, wherein the remote copy process copies data using an initial native block size; and

performing the spectrum sweep throughput probe during the remote copy process when the characteristic of the remote copy process satisfies at least one of the plurality of parameters.

40. (New) The method of claim 39, wherein establishing at least one of a plurality of parameters associated with at least one characteristic of the remote copy process comprises establishing at least one of:

a range of write block sizes to be evaluated in the spectrum sweep throughput process;

a step size by which a write block size is adjusted in the spectrum sweep throughput process;

a time duration for which data transmission is conducted during a phase of the spectrum sweep throughput process;

a lower bound of a write block size; and

an upper bound of a write block size.

41. (New) The method of claim 39, wherein establishing at least one of a plurality of parameters associated with at least one characteristic of the remote copy process comprises establishing at least one of:

a time period permitted to elapse before a spectrum sweep throughput process is initiated; and

a threshold change in transmission conditions associated with the remote copy process.

42. (New) The method of claim 41, wherein a spectrum sweep throughput probe is initiated in response to a predetermined decrease in a data transfer performance parameter during the remote copy process.

43. (New) The method of claim 39, wherein performing a spectrum sweep throughput probe during the remote copy process when the characteristic of the remote copy process satisfies at least one of the plurality of parameters comprises:

performing copy operations from the first storage cell to the second storage cell for a plurality of time intervals, wherein each time interval utilizes a different write block size for a predetermined period of time;

measuring a performance parameter at each of the time intervals; and

selecting a block size for which the performance parameter exceeds a threshold; and

continuing the remote copy with the selected block size.